CLAIM AMENDMENTS

1-19 (Cancelled)

20. (New) A method of selectively sintering particulate material, comprising the steps of:

(i) providing a layer of particulate material;

(ii) providing radiation over the layer of particulate material;

(iii) varying the absorption of the provided radiation across a selected surface portion of the layer to sinter a portion of the material of the layer;

(iv) providing a further layer of particulate material overlying a prior layer of particulate material including a previously sintered portion of material;

(v) repeating steps (ii) and (iii) to sinter a further portion of the material within the overlying further layer and to sinter said further portion with the previously sintered portion of material in the prior layer;

(vi) successively repeating steps (iv) and (v) to form a three-dimensional object;

wherein step (iii) comprises varying the radiation absorption at the particulate material over the selected surface portion of the layer by providing varying amounts of radiation absorbent material over the selected surface portion of the layer.

21. (New) A method according to claim 20, wherein step (iii) comprises providing a first level of radiation absorption on a first area of the selected portion and a second different level of radiation absorption on a second area of the selected portion, contiguous with the first area.

22. (New) A method according to claim 21, wherein step (iii) comprises providing a third different level of radiation absorption on a third area of the selected portion, contiguous with the second area.

23. (New) A method according to claim 21, wherein step (i) comprises providing a first particulate material in the first area and a second different particulate material in the second area of the layer.

24. (New) A method according to claim 20, wherein step (ii) comprises providing radiation on a combination area in which particulate material is to be sintered, the combination area including a centre portion and an edge portion, and step (iii) comprises providing greater radiation absorption at the edge portion than at the centre portion.

25. (New) A method according to claim 24, wherein the absorption of the radiation increases from a minimum value at the centre portion to a maximum value at the edge portion.

26. (New) A method according to claim 24, wherein step (ii) comprises providing radiation on a non-combination area contiguous with, and external to, the combination area, and step (iii) comprises varying the absorption of the provided radiation so that the absorption of the radiation over the non-combination area is less than the absorption of the radiation over the edge portion of the combination area.

27. (New) A method according to claim 26, wherein the absorption of the radiation over the non-combination area is less than the absorption of the radiation over the centre portion of the combination area.

28. (New) A method according to claim 20, wherein step (iii) comprises logically dividing the surface area of the selected portion into an array of segments, and providing a different level of radiation absorption on different segments in the array.

29. (New) A method according to claim 28, wherein step (iii) comprises creating a bitmap image that divides the surface area into a plurality of segments.

30. (New) A method according to claim 20, wherein step (iii) comprises providing radiation absorbent material for absorbing a first wavelength of radiation over a first area of the selected surface portion, and providing radiation absorbent material for absorbing a second different wavelength of radiation over a second area of the selected surface portion.

31. (New) A method according to claim 30, wherein the method comprises providing radiation having a first wavelength over the layer of particulate material to combine the material in the first area, and providing radiation having a second wavelength over the layer of particulate material to combine the material in the second area.

32. (New) A method according to claim 20, wherein step (iii) comprises providing varying amounts of radiation absorbent material over the selected surface portion of the layer by printing radiation absorbent material onto the selected surface portion.

33. (New) A method of selectively sintering particulate material, comprising the steps of:

(i) providing a layer of particulate material;

(ii) varying the absorption of provided radiation across a selected surface portion of the layer to sinter a portion of the material of the layer;

(iii) providing a further layer of particulate material overlying the prior layer of particulate material including the previously sintered portion of material;

(iv) varying the absorption of provided radiation across a selected surface portion of the further layer to sinter a further portion of the material within the overlying further

layer and to sinter said further portion with the previously sintered portion of material in the prior layer;

(v) successively repeating steps (iii) and (iv) to form a three-dimensional object;

wherein the variation of radiation absorption in steps (ii) and (iv) is obtained by providing varying amounts of radiation absorbent material over the selected surface portion of the layer and the further layer respectively.

34. (New) Apparatus for sintering particulate material, the apparatus comprising a controller for enabling the exposure of a surface portion of a layer of particulate material to radiation, wherein the controller is arranged to control the variation of radiation absorption across said surface portion by controlling the deposition of varying amounts of radiation absorbent material over the layer of particulate material.

35. (New) Apparatus according to claim 34, wherein the controller is responsive to temperature variation across the surface portion and is arranged to control the deposition of varying amounts of radiation absorbent material in response to the temperature variation.

36. (New) Apparatus according to claim 35, wherein the controller is arranged to control the deposition of different radiation absorbent materials capable of absorbing different wavelengths of radiation directly onto the surface portion of the layer, and to enable the exposure of the surface portion to radiation of different wavelengths.